

MERC Short Course

New insights into crustal- to microscopic-scale influences on gold endowment in the Abitibi subprovince

October 2, 2023, Kirkland Lake
Northeastern Ontario Mines and Minerals Symposium (NEOMMS)

This one-day pre-symposium short course will highlight new results from Laurentian University's Metal Earth program where in excess of 1,000 km of reflection seismic, magnetotelluric and gravity surveys have provided some of the highest resolution imaging across transects with differing mineral endowment in granite-greenstone terranes across the southern Superior Province.

The presentations will include large-scale crustal architecture and metallogenic comparisons of endowed versus less endowed areas and focused studies on deposits, structural and geochemical controls. The contributions will emphasize the integration of field and laboratory geological, geochemical and geophysical studies providing new insights into the geological and metallogenic framework of endowed terranes, and the architecture of the structural conduits controlling the upward migration of melts and mineralizing hydrothermal fluids. Areas of focus include the Larder Lake, Timmins, Matheson and Malartic-Val-d'Or camps.

Agenda

9:00-9:40 Ross Sherlock; Overview of crustal architecture and endowment from the Metal Earth transects in the Abitibi.

9:40-10:20 Michael Herzog; Multi-scale controls on orogenic gold precipitation and remobilization in the Malartic-Val-d'Or District, Québec.

10:20-10:40 Break

Agenda (continued)

10:40-11:20 Ross Sherlock; Gold Mineralization in the Larder Lake Segment of Larder Lake-Cadillac fault.

11:20-12:00 Jonathan Sutton; Geology of the Upper Beaver oxidized intrusion-related Au-Cu deposit, Kirkland Lake, Ontario

12:00-1:00 Lunch

1:00-1:40 Rasmus Hauguaard; Crustal variations in metal endowed versus less endowed areas of the Abitibi greenstone belt: Insights from the Matheson and Swayze areas.

1:40-2:20 John Ayer: Stratigraphy, crustal architecture and metal endowment of the Timmins region.

2:20-2:40 Break

2:40-3:20 Chong Ma; Western extension of the Larder Lake-Cadillac deformation Zone: Structural constraints from the Ridout deformation zone, Swayze greenstone belt.

3:20-4:00 Julian Melo-Gomez; Trace element signature of gold: Metallogenic implications of Ontario's gold deposits.